

Cemetery Reach Natural Area  
Site Management Guidelines  
*May 2005*



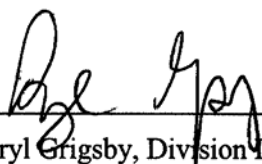
**King County**

Department of Natural Resources and Parks

**Water and Land Resources Division**

# Cemetery Reach Natural Area Site Management Guidelines

*May 2005*



Daryl Grigsby, Division Director

King County Water and Land Resources Division



## **King County**

Department of Natural Resources and Parks  
Water and Land Resources Division

### **Office of Rural and Resource Programs**

201 South Jackson Street, Suite 600  
Seattle, WA 98104  
206-263-3723  
[dnr.metrokc.gov/natural-lands](http://dnr.metrokc.gov/natural-lands)

Alternate formats available  
**296-6519 or TTY Relay: 711**

Cemetery Reach NA SMG\_Final\_May 2005.doc



# Cemetery Reach Natural Area Site Management Guidelines

## Summary

### Site Description

Cemetery Reach Natural Area is a King County Department of Natural Resources and Parks (DNRP) Ecological Land. Ecological Lands are managed for the protection of their ecological value, with appropriate public access.

Cemetery Reach Natural Area consists of six parcels (nearly 46 acres) owned in fee by King County. Cemetery Reach Natural Area is located in the rural Rock Creek Valley, approximately one mile east of Maple Valley and two miles north of Black Diamond. The site is located within the Rock Creek Valley, a 32-square mile area including the Rock Creek and part of the Green River drainages which is the focus of ongoing community planning efforts.

There are two distinct sections of the Natural Area. The eastern portion includes 13 acres of relatively mature second growth forest adjacent to Ravensdale Park, and about 14 acres of riparian corridor along Rock Creek, which extends under 268<sup>th</sup> Ave SE and through the Rock Creek Ranch Development. The western portion of the Natural Area includes another 18 acres of slightly younger second growth forest that borders the western side of Rock Creek Ranch and another planned housing development, Ravensdale Lake, and future County open space.

Rock Creek flows through the site between River Mile ~3.4 and ~2.9. Downstream of 268<sup>th</sup> Avenue SE, the channel is relatively poorly defined, and supports dense vegetation with a high proportion of invasive species, bordered by young planted Douglas-fir (15' tall) mixed with dense red alder. The forest stands east of 268<sup>th</sup> Avenue SE contain mature second-growth coniferous forest (80-100' tall) of Douglas-fir, western hemlock, and western red cedar; the canopy contains bigleaf maple and black cottonwood along the stream corridor. The western section of the site contains a plantation of Douglas-fir and western hemlock (30-40' tall) in the north portion, with a deciduous canopy predominant near Ravensdale Lake.

### Public Use

There is little public use of most of this site. The western portion of the site contains a narrow crossing of an entry to the 'Centennial Trail' along Ravensdale Lake, leading to the "Henry's Ridge" area north and west of Ravensdale Lake. This trail is accessed through a stormwater pond parcel in the housing development, and is used by local pedestrian and equestrian trail users. As King County adds adjacent properties to its inventory in the future, trail connections may be better established and levels of use may change over time.

There is little evidence of use at other parts of the site, other than occasional use of roads on western part of property. The dense vegetation along the Rock Creek corridor and the seasonally wet character of this area limits use. There is no parking established within the site, though a parking lot is available nearby at Ravensdale Park.

### Management Objectives and Recommendations

The goals for all King County Ecological Lands are to conserve and enhance ecological value, and accommodate appropriate public use that does not harm the ecological resources on site. The following are management recommendations that are designed to support these goals. Text follows each recommendation explaining how that recommendation applies at the site.

#### **Objective: Maintain ecological integrity of site**

**Recommendation: Ensure that management and public access support the regional ecological value of the site**

Decisions about site management and public access should consider the hydrologic and habitat value of this site, and should preserve and protect ecological integrity. Public use should be focused on upland forested areas. This overarching recommendation is carried out through the various recommendations below.

**Objective: Contain spread of invasive vegetation**

**Recommendation: Monitor and control invasive vegetation**

Park staff should monitor, contain the spread, and where possible to reduce the extent of noxious and invasive plant species that are present at the site. Control is primarily through manual removal of plants by Park staff. Invasive species are common along the road corridors on the western section of the site where they are readily accessible for control. On the eastern portion of the site, invasive species are prevalent in the stream corridor where access and control ability are more limited. In the eastern part of the site, containing the spread of the species, and additional habitat enhancement capital project work, may be the most appropriate way to address invasive species in this area.

**Objective: Allow current level of impact by passive recreation at the site**

**Recommendation: Monitor public access**

The current level of impact by foot traffic and horse riders, primarily on the small section of the Centennial Trail through the site, does not appear to be having any negative impact on site resources.

Park staff should note changes in types of recreational activities and changes in visitor impacts on the ecological values of the site. This information should be reported annually to King County Natural Resource Lands Management Staff responsible for updating site management guidelines.

**Recommendation: Assess changes in use with new inventory**

As future adjacent public lands come into the King County inventory (Black Diamond Open Space and Maple Ridge Highlands/Henry's Ridge Open Space) address implications for trail use as they affect the Natural Area.

**Objective: Protect the site from inappropriate public uses**

**Recommendation: Control litter/dumping and encroachment activities**

Park staff should monitor the site for encroachment and dumping, and respond as necessary to maintain a clean and safe property. In particular, monitor SE 276<sup>th</sup> Street terminus and logging roads through parcel -9133.

**Objective: Collect information on site conditions to inform management recommendations**

**Recommendation: Conduct further site assessment**

As prioritized and funded, conduct ecological assessment of basic ecological conditions and physical processes. Work with Friends of Rock Creek Valley to share information on the property and Rock Creek. Assessment information may be used to develop habitat enhancement recommendations for the site.

One area in particular to be assessed, if prioritized and funded, is restoration of the poorly-defined Rock Creek channel west of 268<sup>th</sup> Ave SE.

**Objective: Maintain relationships with stakeholders**

**Recommendation: Work with stakeholders to gain information and inform management**

Work with Friends of Rock Creek Valley to share information on ecological resources and site use. This information may be used to identify new management actions or habitat enhancement priorities. If other stakeholder groups become apparent, work with those groups toward the same end.

**Objective: Update Site Management Guidelines****Recommendation: Update SMG within five years or as needed due to new information**

NRL should update the SMG within five years to incorporate new information, accomplishments, and to assess management recommendations at the site. This work should involve Park staff, Basin Stewards, local stakeholders, and other DNRP staff that may have been involved at the site (e.g. ecologists, capital projects).

# Cemetery Reach Natural Area Site Management Guidelines

## Table of Contents

<b>Summary</b>	<b>i</b>
<b>Table of Contents</b>	<b>iv</b>
<b>Acknowledgements</b>	<b>vi</b>
<b>Introduction</b>	<b>1</b>
<b>Part 1. General Property Information</b>	<b>1</b>
<b>Part 2. Acquisition History, Funding Source and Deed Restrictions</b>	<b>5</b>
Parcels -9133 and -9134	5
Parcels -9127, -9128, -9129, and -9130	6
Funding Sources	6
Conservation Futures Tax Levy:	7
1989 Open Space Bond:	7
Salmon Recovery Funding Board:	8
<b>Part 3. Ecological and Physical Setting</b>	<b>8</b>
Topography and Soils	8
Hydrology	10
Rock Creek	10
Ravensdale Lake and Ravensdale Creek	11
Wetlands	12
Vegetation	12
Fish and Wildlife	13
<b>Part 4. Site Use, Access, and Management Chronology</b>	<b>15</b>
Access and Trails	15
Public Use	15
Project Work	15
<b>Part 5. Analysis</b>	<b>16</b>
Restoring Processes, Structure, and Functions	16
Public Use	17
<b>Part 6. Management Goals, Objectives, and Recommendations</b>	<b>17</b>
Goals for Cemetery Reach Natural Area	17
Management Objectives and Recommendations	18
Implementation	19
<b>References</b>	<b>20</b>
<b>Appendix 1. Plant List</b>	<b>21</b>
<b>Appendix 2. Birds Observed in the Rock Creek Valley</b>	<b>22</b>

## **LIST OF TABLES**

Table 1. Cemetery Reach Natural Area General Information.....	2
Table 2. Cemetery Reach Natural Area Parcel Information. ....	2
Table 3. Matrix of Management Recommendations.....	19

## **LIST OF FIGURES**

Figure 1: Vicinity Map.....	3
Figure 2: Parcel Numbers, Parcel Names, and Roads.....	4
Figure 3: Site Features .....	9
Figure 4: View east from 268 <sup>th</sup> into east portion (parcel 9130). ....	13
Figure 5: Rock Creek channel north of 273 <sup>rd</sup> Pl. (parcel 9134) .....	13
Figure 6: View south from easement road into parcel -9133.....	13
Figure 7: View into Parcel -9133 from terminus of 276 <sup>th</sup> St .....	13

# Acknowledgements

## **Contributors:**

### **Water and Land Resources Division, King County Department of Natural Resources and Parks (DNRP)**

Ingrid Lundin, Natural Resource Planner, Natural Resource Lands Management Program

Anne Bikle, Cedar River Basin Steward, Land and Water Stewardship Services

### **Parks and Recreation Division, King County DNRP**

Don Harig, Resource Coordinator, Parks Resource Program

### **Community Stakeholders**

Friends of Rock Creek Valley

## **Report produced by:**

Natural Resource Lands Management Program

Office of Rural and Resource Programs

King County Department of Natural Resources and Parks

201 South Jackson Street, Suite 600

Seattle, WA 98104-3855

(206) 263-3723

## **Suggested citation for this report:**

King County. 2005. Cemetery Reach Natural Area Site Management Guidelines. King County Department of Natural Resources and Parks, Water and Land Resources Division. Seattle, Washington.



# Cemetery Reach Natural Area Site Management Guidelines

## Introduction

Cemetery Reach Natural Area is a King County Department of Natural Resources and Parks (DNRP) Ecological Land. Ecological Lands are a category of Water and Land Resources Division (WLRD) properties managed for the protection of their ecological value. Appropriate public access and interpretive opportunities are accommodated on these sites where they do not harm the ecological value of the site.

This document provides general property and acquisition information, a description of existing site conditions, a chronology of recent events and management actions, and a list of management objectives and recommendations for Cemetery Reach Natural Area. These site management guidelines were developed using guidance established in the King County Water and Land Resources Division Ecological Lands Handbook (King County 2003a). Discussion and comments received at a November 2004 meeting with members of the Friends of Rock Creek Valley and the Backcountry Horsemen-Tahoma Chapter provided guidance for this plan.

## Part 1. General Property Information

Cemetery Reach Natural Area consists of six parcels (nearly 46 acres) owned in fee by King County. Cemetery Reach Natural Area is located in the rural Rock Creek Valley area. The site is located approximately one mile east of Maple Valley and two miles north of Black Diamond (see Figure 1, Vicinity Map). The Natural Area consists of two geographically separated sections (see Figure 2). The eastern portion extends between Ravensdale Park (just west of SE Ravensdale Way/Black Diamond-Ravensdale Road), across 268<sup>th</sup> Avenue SE, and along the Rock Creek corridor through a housing development for another 1/3 mile. The western portion is located near Ravensdale Lake to the west of that same housing development. Figure 2 depicts parcel numbers. Table 1 on the next page provides general information about the location of the Natural Area. Table 2 provides specific information for each parcel in the Natural Area.

The Natural Area parcels are zoned for one home per ten acres. The former Ravensdale town site extends along SE Ravensdale Way, containing homes dating from the 1920s at a density of approximately five homes to the acre. West of 268<sup>th</sup> Ave SE is the Rock Creek Ranch housing development containing homes on approximately one acre lots, through and around which the Cemetery Reach Natural Area extends (see Figure 2). The Maple Woods development is located to the west of the Natural Area, which is built at approximately eight homes per acre. Open space associated with this development will be permanently dedicated to the county as part of Maple Ridge Highlands Open Space (known locally as Henry's Ridge Open Space), providing a 1/5 mile wide forested buffer between the development and Cemetery Reach Natural Area. The Forest Production District extends to the south and east from Ravensdale Way, and parcels zoned for mining are located directly south of Ravensdale Lake.

The Rock Creek Valley is defined by the local community as a 32-square mile area which includes the Rock Creek basin of the Cedar River and extends south to the Green River (FRCV 2004). Community planning work led by the Friends of Rock Creek Valley produced the 'Rock Creek Valley Conservation Plan and Priorities.' "The Plan defines the community's view of resource priorities, and identifies proposed strategies for conserving the most sensitive of these resources." (FRCV 2004, p. 1) This Site Management Guidelines incorporates background and recommendation information from the Conservation Plan.

Local recreation opportunity includes Ravensdale Park just east of the site, an active recreation site managed by King County Parks and Recreation Department. This park supports baseball and soccer fields, the Gracie Hansen Community Center, parking lots, bathrooms, and other recreation facilities. The

privately owned Lake Retreat Church Camp within ½ mile east of Ravensdale Retreat Natural Area also supports many recreation activities for its visitors. The Ravensdale Retreat Natural Area is approximately 140 acres, and lies across SE Ravensdale Way from Cemetery Reach Natural Area.

In their community planning work, Friends of Rock Creek Valley identifies several trail complexes within open space areas in the vicinity. (FRCV 2004) The ‘Ravensdale Ridge’ area is the 2,600 acres of forest directly to the south of Ravensdale Retreat Natural Area owned by Weyerhaeuser and Plum Creek. Weyerhaeuser and Plum Creek both allow non-motorized public access to their lands, and this area supports about 17 miles of trails. To the northwest, on the King County Maple Ridge Highlands Open Space, the ‘Danville-Georgetown’ trail network as mapped by the Friends of Rock Creek Valley contains approximately 21 miles of trails which link to the regional Cedar River Trail and the City of Seattle’s Cedar River Pipeline Road.

Other publicly owned land in the vicinity includes nearly 620 acres owned by the King County Sheriff’s Office located across Kent Kangley Road to the northeast of Ravensdale Retreat Natural Area. Part of this parcel is used primarily as a shooting range but there may be public access to a portion of this site. Although proposals have come forward for conversion of a portion of the site to an Equestrian Center, there have been no clear plans for this activity to date. King County owns conservation easements on several hundred acres of Plum Creek land extending between Ravensdale Lake and Lake Sawyer Regional Park. This land, called Black Diamond Open Space, is expected to be transferred to King County as part of the Black Diamond UGA Agreement. As noted on previous page, King County owns an interim conservation easement on the portion of Maple Ridge Highlands Open Space/Henry’s Ridge that lies just west of the site. This land is anticipated to be dedicated to King County at some point in the

**Table 1. Cemetery Reach Natural Area General Information.**

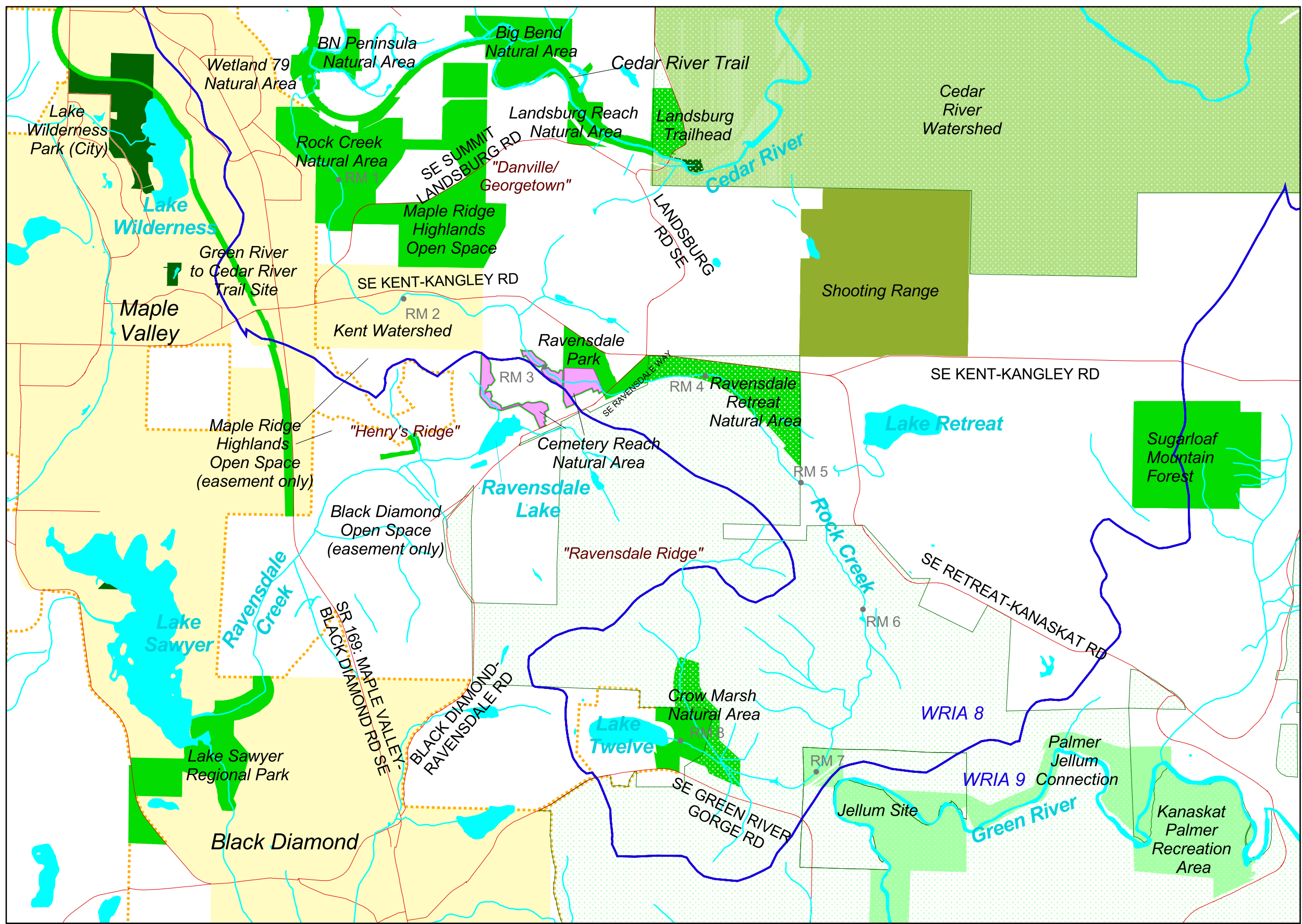
Best Available Address	Located between Kent Kangley Road and SE Ravensdale Way/Black Diamond-Ravensdale Road
Thomas Guide Map Location	p. 718, E6, F6, E7
Legal Description	Section 35, Range 6E, Township 22N
Acreage	45.86 acres
Drainage Basin	Rock Creek (eastern portion) and Soos Creek (western portion)
WRIA	8 Cedar River (eastern portion) and 9 Green River (western portion)
Council District	12
King County Sensitive Areas	Stream, coal mine, erosion

**Table 2. Cemetery Reach Natural Area Parcel Information.**

Parcel Number	Name Used in Document <sup>1</sup>	Acreage*	Purchase Date	Ownership type/price	Previous Names	Zoning	Funding Source	Recording Number
3622069133	-9133	18.00	9/12/00	Dedication	McCann Settlement Open Space Dedication	RA-10	Dedication	20000912000816, -21, -22, and -23
3622069134	-9134	13.76				RA-10 & RA-5		
3622069127	-9127	3.93	3/8/02	\$650,000 for all three	McCann	RA-10	Open Space Non-Bond, CRT, SRFB	20020308002405 20030312002056
3622069128	-9128	3.01				RA-10		
3622069130	-9130	4.14				RA-10 & RA-5		
3622069129	-9129	3.02	4/19/02	\$144,480	McCann	RA-10 & RA-5		20020419001697 20030312002056

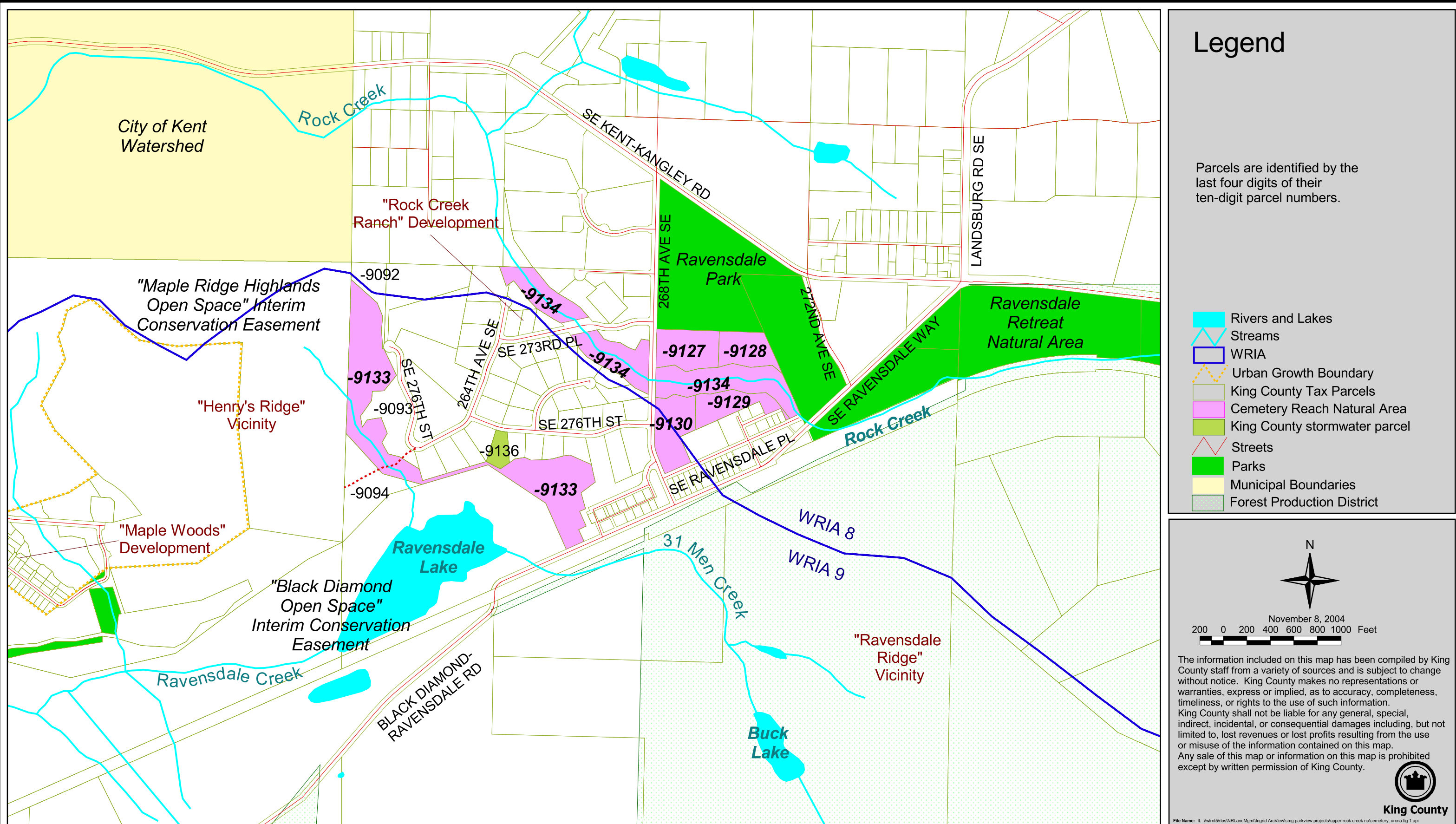
\*acreage from King County Assessor’s data. Email from Linda Holecek 9/27/04.

<sup>1</sup> Parcels are referred to by the last four digits of the ten-digit parcel number.



**Figure 1**

*Cemetery Reach Natural Area: Vicinity Map*



## Figure 2

*Cemetery Reach Natural Area: Parcel Numbers*

future. Neither the Maple Ridge nor the Black Diamond conservation easements give King County the right to grant public access to the site at this time (however the policies of the landowners themselves may allow public access).

This reach of the creek, and the site itself, is named for the historic Ravensdale Cemetery which is now located within the Rock Creek Ranch.

## Part 2. Acquisition History, Funding Source and Deed Restrictions

There were two phases to the acquisition of Cemetery Reach Natural Area: acquisition of parcels -9133 and -9134 in 2000, and of the remaining four parcels in 2002.

### Parcels –9133 and -9134

Parcels -9133 and -9134 were dedicated to the county as part of a legal settlement between the former owner/developer and King County (Recording Number 20000912000824).

Roads within the Rock Creek Ranch development are dedicated to the County and open to public use (Recorded Document # 20000912000824, p. 30 & 34).

Parcel -9133 is subject to a “Private Ingress, Egress, and Utility Easement.” (Recording Number 20000912000814) This easement is eighty feet in width and follows an existing gravel road into the parcel, extending from SE 276<sup>th</sup> Street west through privately owned parcel 362206-9093, Natural Area parcel –9133, to privately owned parcel 362206-9094 immediately to the west. (Approximate easement location and last four digits of parcel numbers are depicted in Figure 2; easement is mapped on Recorded survey 20000912900014.)

“Grantor [owner of lot 362206-9093] hereby declares and impresses a perpetual, non-exclusive easement for ingress, egress and utilities over, across, under and upon the Easement Area for the benefit of ‘grantee’ [owner of lot 362206-9094].

Maintenance costs shall be divided equally among ‘using’ owners of the property...EXCEPT that repair costs caused by above normal use by one ownership (such as that caused by equipment used in construction) shall be borne by the causing user. A majority vote of ‘using’ lot owners will be required to entail maintenance costs... ‘Using’ owners shall be defined as owners of lots of above describe property [lots 362206-9094 and -9093].”

The easement details action to be taken in the case of nonpayment. The conditions of the private easement place responsibility for maintenance costs on the owners of lots 362206-9094 and -9093.

King County was granted a “Public Ingress, Egress, and Utility Easement” by the owners of parcels 362206-9093 and 362206-9094 (Recording Number 20000912000815). The easement is 20 feet wide and follows the existing gravel road (and location of private easement) across these two parcels from SE 276<sup>th</sup> Street. The easement extends from SE 276<sup>th</sup> Street west through parcel 362206-9093, Natural Area parcel –9133, through parcel 362206-9094 to the western boundary. The property to the west will be dedicated to King County in the future as part of the Maple Ridge Highlands Open Space. (See Figure 2; also easement is mapped on Recorded survey 20000912900014).

“Grantor hereby declares and impresses a perpetual, non-exclusive easement for ingress, egress and utilities over, across, under and upon the Easement Area for the benefit of Grantee [King County].

Maintenance costs and expenses for the easement area shall be divided equally between the grantors, their successor, heirs and assigns [the owners of parcels 3622069093 and 3622069094].

To the extent any repairs other than ordinary maintenance to the easement area are necessitated by the comparatively excessive, more intense or frequent use by (e.g. such as that caused by



excessive pedestrian, equestrian or vehicular use), or arise from the negligence or intentional misconduct of, any one party (the “Responsible Party”), the Responsible Party shall pay all costs incurred to repair the Easement Area resulting from such use.”

Therefore the conditions of the public easement place responsibility for maintenance costs on the owners of lots 362206-9094 and -9093, with the exception that excessive use of the easement area may require payment by the responsible party.

There is another logging road that extends from the road terminus of SE 276th Street through the northern part of King County-owned parcel 362206-9133 to Maple Ridge Highlands Open Space (Henry’s Ridge). However, the first ten feet of this logging road lie within privately owned parcel 362206-9092 and King County has no access easement across this parcel, therefore making the road not accessible to the county along the road bed itself (see Figure 3 for aerial photo). Apparently this road is now fenced (burlingame pers. comm 2004b).

Eight privately owned parcels within the development itself (parcels 362206-9083, -9084, -9088, -9089, -9090, -9091, -9093, and -9094) are subject to a 150-foot wide conservation easement for a wildlife corridor (Recording Number 20000912900014, page 11 General Note B, mapped on page 6 & 8). The corridor connects the eastern and the western portions of Cemetery Reach Natural Area (see wildlife corridor approximate location mapped on Figure 3). This is “a wildlife corridor easement pursuant to King County Code 21A.14” and is in addition subject to restrictions on structures, requirement to preserve native vegetation, and prohibition against removal of vegetation without permission from King County Department of Development and Environmental Services. The designation of the wildlife corridor does not grant access to the general public. These corridors would only be monitored by DDES if they received a complaint about violations occurring on the parcels.

### **Parcels -9127, -9128, -9129, and -9130**

These properties were acquired in 2002 using Open Space Non-Bond, Conservation Futures, and Salmon Recovery Funding Board funds (Holecek pers. comm. 2004).

Title deeds show that two easements for ingress, egress and utilities cross parcels -9127 and -9130 to reach the parcels -9128 and -9129 in the interior of the Natural Area (Recording Number 20000912000819 and 20000912000818). These access easements were associated with previous development plans for the area and would no longer be used to create roads or utilities across the Natural Area.

The parcels are all subject to a water pipeline easement as referenced in Recording Number 199706301202, which dates from earlier in the century. Information is not specific enough to identify location of this easement.

All four parcels are subject to reserved mineral rights under King County Recording Number 198907070390, as modified in 199301152402. The property boundaries were determined in Boundary Line Adjustments 20000912900014 and 20020410900006.

All four parcels are subject to a Deed of Right to use land for Salmon Recovery and Conservation Purposes (20030312002056). The Deed of Right stipulates that use of the land is to be consistent with conservation purposes, unless SRFB approves substitution of comparable land (explained further below).

### **Funding Sources**

Parcels -9127, -9128, and -9130 have the following language on their title deed (parcel -9129 lacks this language):

“The property herein conveyed is subject to open space use restrictions and restriction on alienation as specified in RCW 84.34.200, et seq., and King County Ordinance Nos. 9071, 10750, 11068, and 11713.”

These restrictions refer to the following documents:

- Ordinance 9071 (July 27, 1989) authorized a public vote on 1989 Open Space Bonds.
- Ordinance 10750 and 11068 (March 8 and October 3, 1993) authorized the Regional Conservation Futures 1993 Bond Acquisition Program (per regulations in RCW 84.34.200). Under Conservation Futures, property use is restricted to low-impact passive-use recreation, non-motorized use, and minimum 15% impervious surfaces.
- Ordinance 11713 (February 15, 1995) refers to an allocation of Waterways 2000 funds to acquisition and stewardship. There are no explicit restrictions contained in the ordinance.

The following information pertains to the funding sources referred to in the deed restrictions:

#### *Conservation Futures Tax Levy:*

Conservation Futures Tax (CFT) levy is authorized by state statute RCW 84.34.230. A county may place this levy upon all taxable property in its jurisdiction. Revenues may be placed in a Conservation Futures Fund for jurisdictions or nonprofit nature conservancy corporations to acquire open space land or rights to future development within that county (these development rights are termed “conservation futures” in RCW 84.34.220). Open space is defined in RCW 84.34.020 generally as land contributing to natural resources, streams, water supply, public land network, historic sites, visual quality, or as certain agricultural conservation lands. Acquisition criteria identified by King County include: wildlife, salmonid, or rare plant habitat value; scenic resource, community separator, greenbelt, or general park and open space value; or historic and cultural resources. Additional consideration is given to passive recreation opportunity, interpretive opportunity, threat of loss, complexity of acquisition, public-private partnership, regional significance, relationship of proposed acquisition to existing parks, trails, or greenway systems or plans, and short-term and long-term stewardship commitment at the site (KCC 26.12.025).

King County Council directs the spending of a portion of annual CFT funds; a Citizen’s Oversight Committee reviews and approves competitive applications for the remainder of the funds. CFT funds are allocated to sponsoring jurisdictions with the requirement that matching funds from the applicant jurisdiction are of equal or greater value to CFT funding sought (matching funds may be cash, land trade, or value of land purchased adjacent to proposed acquisition). Acquisitions may be fee simple or less-than-fee acquisitions.

Purchases made with Conservation Futures funds are to be used for low-impact, passive-use recreation. Motorized use is limited to parking/staging/maintenance areas. “Non-vegetative impervious surfaces” should cover less than 15% of the site (CFT 2002). Conservation futures interests shall not be transferred except with agreement that land interests shall be preserved in accordance with the intent and language of RCW 84.34.230; uses of lands shall not be altered unless equivalent lands within the geographic jurisdiction are provided (KC Ordinance 10750, p. 10).

#### *1989 Open Space Bond:*

King County voters authorized the \$117,640,000 King County Open Space Bond initiative, described in King County Ordinance 9071, in November 1989 to provide funds for the acquisition, development, renovation and improvement of public green spaces, green belts, open space, parks and trails in King County. Specific goals included preserving wildlife, enhancing scenic vistas, providing access to the water and open space, and providing trail connections between virtually all the cities in King County to a regional trail system and trails within the suburban cities and unincorporated areas of King County (King County 1989). King County Ordinance 9071 authorizes reclassification of bond funds in Section 8, part

C. Restrictions on land conveyance associated with Open Space Bond funds are identified in Section 8, part D.

#### *Salmon Recovery Funding Board:*

The Washington State Salmon Recovery Funding Board (SRFB) was created in 1999 to administer funds for salmon recovery appropriated by the state legislature and Congress (RCW 77.85). (SRFB 2002) SRFB's mission is to "support salmon recovery by funding habitat protection and restoration projects and related programs and activities that produce sustainable and measurable benefits for fish and their habitat." SRFB receives administrative support from the State Interagency Committee for Outdoor Recreation (IAC).

Project sponsors such as cities, counties, agencies, tribes, non-profit organizations, and private citizens submit applications to local lead entities such as Watershed Resource Inventory Area Steering Committees. The lead entities submit prioritized lists of project applications to SRFB for consideration. Sponsors request funds to protect or restore salmon habitat, commit to long-term monitoring, and provide a monetary or in-kind match of 15% or more. Projects may include acquisition; in-stream passage or diversion; in-stream, riparian, upland, or estuarine habitat actions; or assessments and studies.

Lands acquired in fee with SRFB assistance must be dedicated to habitat conservation and salmon recovery uses in perpetuity. This is typically done through a recorded Deed of Right to Use Land for Salmon Recovery and Conservation Purposes. This Deed conveys property interests to the public forever. A Deed of Right to Use Land for Salmon Recovery and Conservation Purposes to the State of Washington was filed for parcels -9127, -9128, -9129, and -9130 in March 2003, Recording # 20030312002056.

## Part 3. Ecological and Physical Setting

This section describes the natural resources and ecological processes associated with Cemetery Reach Natural Area. Additional analysis is presented in Part 6 below. Figure 3 depicts streams, wetlands, and topography.

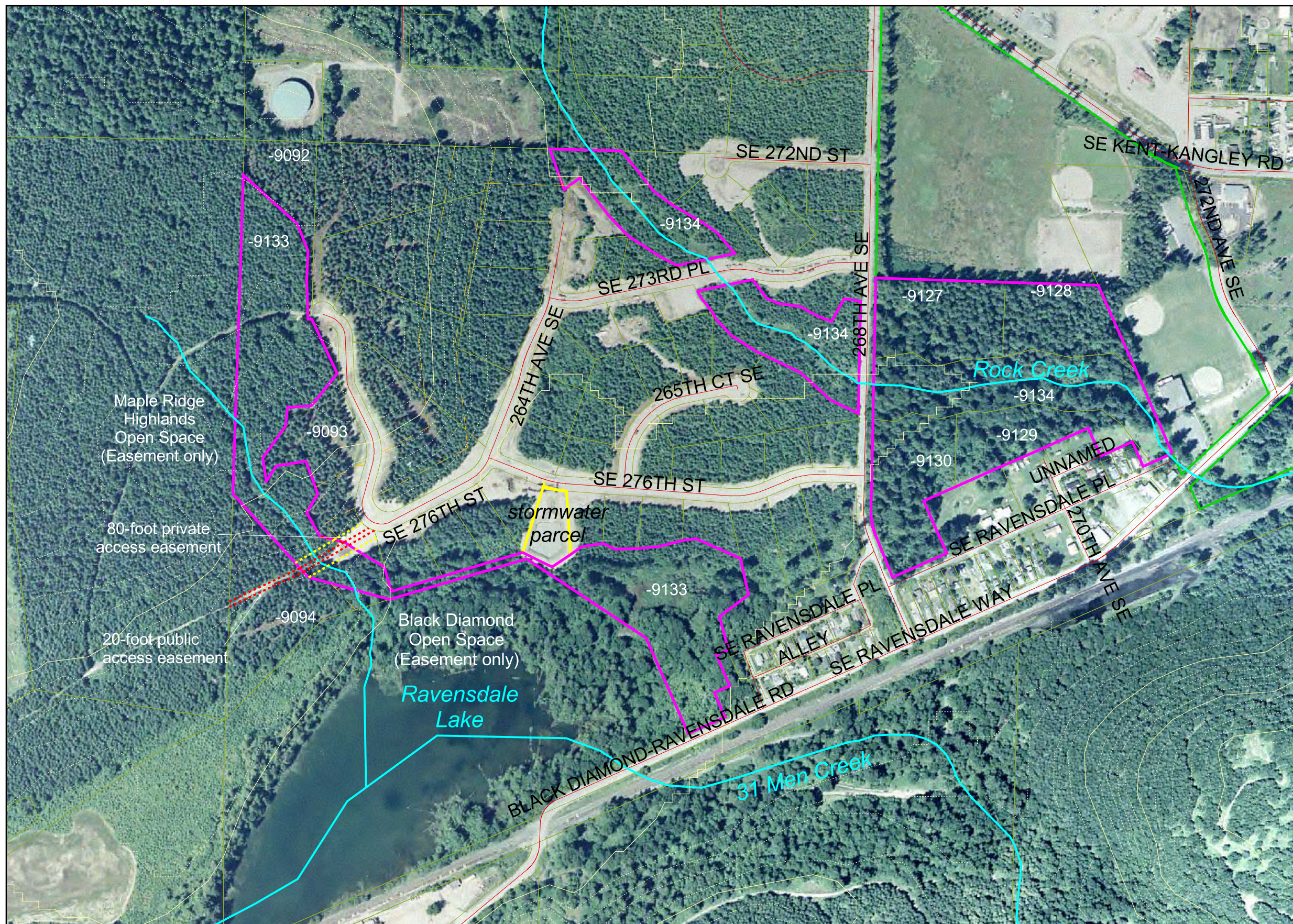
### **Topography and Soils**

Cemetery Reach Natural Area is located on either side of the hydrologic boundary between Rock Creek (WRIA 8) and Ravensdale Creek (WRIA 9), although the topography is nearly flat at the basin boundary. Ravensdale Ridge rises steeply to the south of SE Ravensdale Way, rising approximately 500 feet from the valley floor across ½ mile distance. West of Rock Creek, steep slopes (called Henry's Ridge) rises to similar elevation is gained across similar distance, its high point reached within Maple Ridge Highlands Open Space and the Maple Woods development to the west. The northwest corner of Cemetery Reach Natural Area (parcel -9133) lies on the eastern slope of Henry's Ridge. The remainder of the Natural Area acreage is relatively flat in elevation, surrounding Ravensdale Lake and Rock Creek.

Two main soil types predominate at the site (Snyder et al. 1973):

- The northwestern portion of parcel -9133 (on Henry's Ridge) support Alderwood gravelly sandy loam ranging between 6-15%, and 15-30% slopes. Alderwood soils are located on uplands, formed under conifers in glacial deposits. Runoff is slow to medium, and erosion hazard is moderate for sloped 6-15% and severe for slopes 15-30%.
- The southeast portion of parcel -9133 and the remaining four parcels support Barneston gravelly coarse sandy loam ranging between 6 and 30% slopes. There is no description available for this soil type in the King County Soil Survey.





## Legend

Wildlife corridor and road easement area are both mapped from King County GIS Parcel Tools records (surveyed for Boundary Line Adjustment, Recording Number 20000912900014). Refer to SMG for discussion.

Aerial photo date 2002.

- Private easement (80 feet wide)
- Public access easement (20 feet wide)
- Wildlife Corridor
- 100 ft Contour lines
- 20 ft Contour Lines
- Streams
- Streets
- Cemetery Reach Natural Area
- King County stormwater parcel
- Parks
- King County Tax Parcels



November 8, 2004  
100 0 100 200 300 400 500 Feet

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.



King County

File Name: IL:\w\m\GIS\NRLandMgmt\Ingrid ArcView\smg parkview projects\upper rock creek na\cemetery\_urncna fig 1.apr

## Figure 3

*Cemetery Reach Natural Area: Site Features*



## Hydrology

As noted above, the site is located in two separate drainage basins.

### *Rock Creek*

The eastern portion of the site contains Rock Creek between approximately River Mile 3.4 and 2.9. Rock Creek (WRIA #08.0339) is an 8.2-mile,<sup>2</sup> Class 2 salmonid-bearing stream. Crow Marsh, Lake Twelve, and small tributary streams from surrounding slopes comprise the headwaters for Rock Creek. Rock Creek is tributary to the Cedar River at approximately River Mile 18 of the Cedar. The King County Sensitive Areas Folio classified the lower reaches as Class 2 stream with salmonids, but it did not map most of the length of Rock Creek probably due to the intermittent nature of the stream for much of its length (King County 1990).

Rock Creek is seasonally intermittent above approximately River Mile 2.4. A grant application for Conservation Futures funds for the Ravensdale Retreat Natural Area contains the following description (King County 2001a):

“Above RM 2.4...stream flow is seasonal and appears strongly linked to precipitation activity and groundwater levels. In years of abundant flow, coho have been reported to use areas above RM 2.4. The value of Rock Creek’s unique flow regime is that it functions as both a vital source of water for the lower reaches at all times, and during high water years, as a natural detention basis that greatly dampens erosive flows. The dynamic seasonal flow regime also plays a critical role in creating and preserving genetic, behavioral, and population diversity among the aquatic-dependent species due to the ever-changing physical habitat conditions.”

The Rock Creek subbasin, as designated in the Lower Cedar Basin Action Plan, is the largest in the basin planning area at approximately 7700 acres. At the time of the Lower Cedar Basin Action Plan, it was noted that the Rock Creek subbasin is the largest in the entire Lake Washington watershed without urban or suburban development. However, the designation of Lake Twelve within the City of Black Diamond Urban Growth Area may have changed the accuracy of that statement (WMC 1998, p. 3-55). As of 1993, the basin was approximately 77% forested and 13% converted to development (King County 1993, p. 4-30).

The Lower Cedar Basin Action Plan makes the following statements about Rock Creek:

“Rock Creek has exceptionally high natural resource value. It is the single largest source of municipal water for the City of Kent, and with few exceptions, the subarea’s stream and wetland habitats are relatively intact. Lower Rock Creek’s riparian areas and channel reaches are reminiscent of old growth in structure and complexity, making its aquatic habitat among the best remaining in western King County.

Between RM 0.0 and 2.6, Rock Creek’s habitat is classified as a regionally significant resource area<sup>3</sup> because of its habitat quality and current and future potential for salmonid production.” (p. 3-55)

The Current and Future Conditions Report states:

---

<sup>2</sup> Citations of stream length vary; the 8.2 mile figure is from Lower Cedar Basin Action Plan p. 4-39 (WMC 1998).

<sup>3</sup> Regionally Significant Resource Areas (RSRAs): RSRAs are those portions of watersheds that contribute to the resource base of the entire Puget sound region by virtue of exceptional species and habitat diversity and abundance when compared to aquatic and terrestrial systems of similar size and structure elsewhere in the region. RSRAs may also support rare, threatened or endangered species or communities. (2000 King County Comprehensive Plan Glossary <http://www.metrokc.gov/ddes/compplan/2000/#chapter4>)

“Rock Creek is outstanding habitat throughout most of its length and is among the best habitats in western King County... Natural system stability is enhanced by a relatively low gradient, a storm hydrology dampened by large amounts of glacial outwash soils in the subbasin, and a series of uninventoried riparian wetlands between RM 2.6 and 0.8.... Much of the vegetation, which has a high proportion of coniferous trees, is approaching old growth in size and structural complexity. Most of the stream has high volumes of LWD. In many reaches the habitat can best be typified as continuous “debris complexes” within which complex pool and riffle habitats have developed.” (7-73)

Rock Creek flows through several corridors of publicly owned land, including Crow Marsh Natural Area between RM 8.2 and 7.4, Ravensdale Retreat Natural Area between RM ~5.0 to ~3.4, Cemetery Reach Natural Area ~3.4 to ~2.9, the City of Kent’s Watershed between RM ~2.4 and ~1.5, and the Rock Creek Natural Area between most of RM ~1.2 to ~0.4, and a small amount of acreage at the confluence with the Cedar River (all river miles approximate, based on Figure 3-14 in WMC 1998). Many of these parcels in King County ownership were prioritized through basin planning activities during the 1990s and have been acquired in the past decade.

Rock Creek’s flow is seasonally intermittent through the site. The stream bed varies in its width and definition, varying from relatively narrow at the SE Ravensdale Way undercrossing to a broad and poorly defined channel downstream of 268<sup>th</sup> Avenue SE and through Rock Creek Ranch development.

Communication with a local resident and FRCV member indicates that the reach of Rock Creek between the Kent Watershed and through Ravensdale Retreat Natural Area has historically supported lower flows than other portions of the stream due to high infiltration rates of water into porous soils. The stream in the past was a series of connected pools. The resident reports that salmon runs may have historically adapted to migrate upstream late in the season (November or December), when fall rains raised the level of the creek high enough for salmon to pass through the Cemetery Reach of the creek and move upstream. (Brathovde pers. comm. 2004b)

According to local residents, the logger who performed the last logging operation at the site was not aware of the stream corridor. The logger ran motorized equipment through the area and left logging slash in the stream corridor, affecting the topography and fish passability of the stream through this site. (Brathovde pers. comm. 2004b) Logging activities during the 1980s also affected the integrity of the stream channel through Ravensdale Retreat Natural Area. (ibid)

### *Ravensdale Lake and Ravensdale Creek*

The western part of Cemetery Reach Natural Area is located in the WRIA 9, within the drainage basin referred to as Covington Creek (WRIA #09.0083) in the 1975 Washington Dept of Fisheries Catalog of Washington Streams (Williams et al. 1975). Ravensdale Creek is not recognized in the Catalog of Washington Streams: Ravensdale Creek is labeled as the upper extent of Covington Creek from RM 9.55 at Ravensdale Lake through Lake Sawyer at RM 7.1. However, this stream reach is commonly called Ravensdale Creek by the community.

Ravensdale Lake, 18 acres in size, was probably created during mining operations in order to wash coal that was extracted from local mines (burlingame 2004). Inflow to Ravensdale Lake includes unnamed seeps and streams off of Henry’s Ridge to the north, and outflow from Buck Lake via 31 Men Creek on Ravensdale Ridge to the south. Ravensdale Lake’s outflow is Ravensdale Creek, which enters Lake Sawyer. Lake Sawyer’s outflow is Covington Creek (WRIA #09.0083), which flows to Big Soos Creek (WRIA #09.0072), and ultimately the Green River (WRIA #09.0001).

The upper portion of the Ravensdale Creek drainage (from the headwaters through Lake Sawyer) was labeled a Regionally Significant Resource Area (RSRA) in the Soos Creek Basin Plan (King County 1990, p. 102). The Lake Sawyer Management Plan states that RSRAs “are defined by watershed structure

and function, aquatic habitat diversity, and salmonid diversity and abundance.” (King County 2000a, p. 2-5). The Lake Sawyer Management Plan reports that “Ravensdale Creek is in good condition and provides quality habitat for salmon spawning and rearing, as well as wildlife” (ibid.).

Ravensdale Creek flows almost entirely through publicly owned open space. Ravensdale Lake and the most of the upper extent of the creek are within the Black Diamond Open Space, the Plum Creek Timber Company land on which King County currently holds Conservation Easements. From Black Diamond Open Space, the creek flows through Lake Sawyer Park (currently owned by King County, pending transfer to the city of Black Diamond) and enters Lake Sawyer.

The western portion of Cemetery Reach Natural Area contains one mapped tributary to Ravensdale Lake, although the tributary bed was dry in August 2004 (observed at the culvert under the logging road extending off of SE 276<sup>th</sup> Street, on which King County holds an easement).

## **Wetlands**

The King County Wetlands Inventory maps no wetlands on the site. Off-channel wetlands may exist along the Rock Creek corridor, but none were identified during summer 2004 field work for this document.

## **Vegetation**

The eastern portion of Cemetery Reach Natural Area between SE Ravensdale Way and 268<sup>th</sup> Avenue SE contains mature second-growth forest. The canopy consists of 80-100 foot tall Douglas-fir, western red cedar, and western hemlock. Vegetation along the stream corridor is significantly more deciduous containing higher proportions of bigleaf maple and black cottonwood. Relict fruit trees occur along the southeast edge of the creek near SE Ravensdale Way. The understory consists of dense growth of native vegetation such as beaked hazelnut, cascara, vine maple, salmonberry, Indian plum, and willow. Invasive non-native species are present, particularly along the stream corridor and on the edges of the site, including blackberry, herb Robert, holly, and Scot’s broom.

West of 268<sup>th</sup> Avenue SE, the stream corridor runs through a stand of 10-15 year old planted Douglas-fir, with black cottonwood, cherry, salmonberry, and vine maple growing along the stream. The corridor supports extensive reed canary grass, with blackberry, thistle, foxglove, and teasel observed along SE 273<sup>rd</sup> Place.

The western portion of the Natural Area supports two distinct types of vegetation, as evident in the Figure 3 aerial photo. In the north, an overstory of older Douglas-fir, with occasional western hemlock, approximately 30-40 feet in height. Native understory includes salmonberry, red alder, vine maple, cherry, and blackcap raspberry. The road through the northern part of the site supports invasive species including buddleia, tansy ragwort, Himalayan and evergreen blackberry, foxglove, and Saint John’s wort.

To the south, along Ravensdale Lake and the south side of the development, the overstory is dominated by deciduous trees (bigleaf maple and black cottonwood) with a dense understory that includes salal, salmonberry, red huckleberry, as well as non-native blackberry. The land surrounding Ravensdale Lake is within Black Diamond Open Space rather than Cemetery Reach Natural Area. Vegetation around the lake contains a higher proportion of mature western redcedar and Douglas-fir, with wetland fringe around the perimeter of the lake.

A species list compiled during July and August 2004 site visits is included in Appendix 1. Areas visited were primarily along trails and roads.

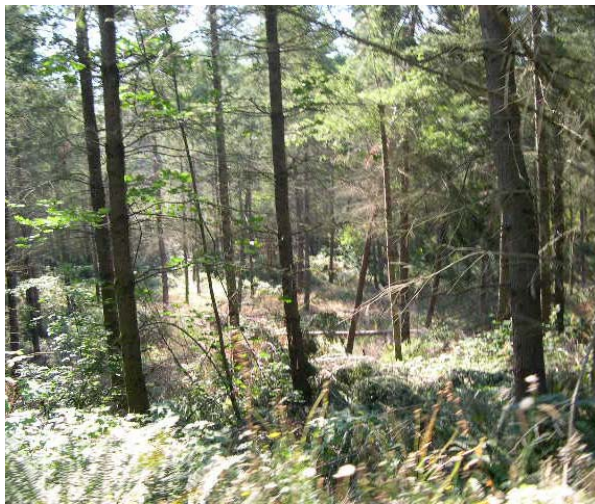
Tansy ragwort, a listed noxious weed for which control is required, was observed growing along the logging road through the northwest corner of the site on parcel -9133. There may be more tansy ragwort growing at the site in other areas.



**Figure 4: View east from 268<sup>th</sup> into east portion (parcel 9130).**



**Figure 5: Rock Creek channel north of 273<sup>rd</sup> Pl. (parcel 9134)**



**Figure 6: View south from easement road into parcel -9133**



**Figure 7: View into Parcel -9133 from terminus of 276<sup>th</sup> St**

## **Fish and Wildlife**

The Lower Cedar River Basin Action Plan reports that Rock Creek “has been highly regarded by fisheries professionals and local residents alike for its runs of four key species of anadromous salmonids: sockeye, coho, Chinook salmon and steelhead trout.” (WMC 1998, p. 3-55) The Current and Future Conditions Report describes Rock Creek as outstanding habitat for most of its length.

“[The limited level of disturbance] contributes to a stable, diverse habitat even in the higher-gradient reaches. Natural system stability is enhanced by a relatively low gradient, a storm hydrology dampened by large amounts of glacial outwash soils, and a series of uninventoried riparian wetlands between RM 2.6 and 0.8...Much of the riparian vegetation, which has a high proportion of coniferous trees, is approaching old growth in size and structural complexity. Most of the stream has high volumes of LWD.” (King County 1993, p. 7-73)

The seasonal nature of Rock Creek limits the upstream extent of salmonids during much of the year. WRIA 8 fish distribution maps indicate that cutthroat trout use extends to the upper reaches of Rock Creek, but coho, sockeye, Chinook and steelhead trout distribution are limited to the first few miles of Rock Creek (King County 2001b) Coho presence through this reach of the creek was documented in previous decades. Steelhead trout and Chinook are limited to below RM 2; sockeye are mapped through approximately RM 2.5 (King County 2001b).

WRIA 9 fish distribution maps indicate that Ravensdale Creek and Ravensdale Lake are used by coho salmon and cutthroat trout. The maps indicate that Chinook salmon “should be present” in Covington Creek through Lake Sawyer; steelhead trout are present through Lake Sawyer but have not been documented in Ravensdale Creek (King County 2000b). According to Friends of Rock Creek Valley a kokanee coho population existed in Ravensdale Lake/Creek in the past, but has disappeared in the last five years (burlingame pers. comm. 2004b) A colony of freshwater mussels is present at the outlet of Ravensdale Lake (ibid.), and freshwater mussels are present downstream in Ravensdale Creek (observed by NRL staff within Lake Sawyer Park).

There has been no inventory of fish or wildlife specifically performed at this site. A list of birds observed in Rock Creek Valley is included in Appendix 2.

The Wildlife Habitat Network identified in the King County Comprehensive Plan<sup>4</sup> extends south from Ravensdale Lake to Lake Sawyer and to Crow Marsh/Lake Twelve; and extends north from Ravensdale Lake to the Cedar River. As described in Part 2, a wildlife corridor was designated along this wildlife network, running through eight parcels within the development and through the western section of the Natural Area. This portion of the privately owned parcels are subject to restrictions on vegetation removal and structures.

The Friends of Rock Creek Valley Conservation Plan identifies a 1000-acre block of forest including Rock Creek Natural Area, Danville-Georgetown & Henry’s Ridge Open Space (both part of Maple Ridge Highlands Open Space; Danville-Georgetown portions owned by King County Parks and Henry’s Ridge portions under interim conservation easement by King County Parks), and the Kent watershed (FRCV 2004, p. 22). The narrow wildlife corridor designated through private parcels provides a limited connection between these northern properties and Cemetery Reach Natural Area/Ravensdale Lake.

The large forested tracts of Ravensdale Retreat Natural Area, future Black Diamond Open Space, and Ravensdale Ridge together represent thousands of acres of potential wildlife habitat that connect with the wildlife corridor and Cemetery Reach Natural Area.

---

<sup>4</sup> The King County Wildlife Habitat Network is described in the 2004 King County Comprehensive Plan as a method to “identify and protect critical fish and wildlife habitat conservation areas, [and] to link those critical habitat areas and other protected lands through a network system.” (King County 2004, p. 4-19) The network is intended to provide some degree of landscape-level protection for wildlife species, to maintain wildlife as viable components of ecosystems, and to facilitate wildlife movement between large habitat patches. This approach creates a network of natural lands across the landscape by linking contiguous blocks of ecologically significant natural resource areas (hubs) with natural corridors through adjacent critical habitat, open space tracts, and wooded areas. Ideally, these corridors would enable terrestrial populations to intermingle and disperse from east to west and north to south within the County.



## Part 4. Site Use, Access, and Management Chronology

This section provides information about access points and use of the site, and management actions taken since acquisition.

### Access and Trails

Although there is no parking at the site, nearby public parking is available at Ravensdale Park/Gracie Hansen Community Center located on the east side of Ravensdale Way. The site is accessible along various roadways, although there are few trails that lead through the site.

Two access points to the western parcel -9133 provide trail access to the “Centennial Trail” that runs along Ravensdale Lake, and to the Henry’s Ridge Open Space area (Burlingame 2004). On the western parcel -9133, there is one legal access point from SE 276 Street. A public access easement runs on a logging road from SE 276<sup>th</sup> Street across private property to the parcel, continuing on to the land which will be acquired as Maple Ridge Highlands/Henry’s Ridge Open Space (described in Part 2, mapped with a dotted red line in Figure 3). An additional point of entry to parcel -9133 is the King County stormwater pond parcel (parcel -9136) as shown on Figures 2 and 3. From the stormwater pond parcel, users cross over the Cemetery Reach Natural Area parcel -9133 to access the Centennial Trail.

The Centennial Trail dates back to the turn of the century, connecting the former town of Ravensdale to Henry’s Ridge, and continuing toward Lake Sawyer. The Centennial Trail runs through property currently owned by Plum Creek, part of the Black Diamond Open Space on which King County holds a conservation easement. The Henry’s Ridge area is owned by the development company developing Maple Woods. The land surrounding Ravensdale Lake and encompassing much of Henry’s Ridge is anticipated to be dedicated to King County, which will mean that these trails will in the future be on King County land.

A northern logging road is visible in the aerial photo, at the terminus of SE 276<sup>th</sup> Street. However, a parcel at the entrance to the northern logging road is privately owned as discussed in Part 2 and entry on this road would trespass across private property.

Entry to the upland portions of the eastern parcels is available from 268<sup>th</sup> Avenue SE, but this area appears to support little regular use. The dense vegetation in the Rock Creek stream corridor through the Rock Creek Ranch development (parcel -9134) along SE 273<sup>rd</sup> Place prohibits ready access to this parcel.

### Public Use

There is little evidence of regular use of this property, except for the portion of parcel -9133 adjacent to Ravensdale Lake, where trails in the site and in adjacent private properties are used by local residents for walking, horseback riding, and nature observation.

When Black Diamond Open Space and Maple Ridge Highlands/Henry’s Ridge Open Space are transferred to the county, Cemetery Reach Natural Area may experience increased use as they enter public ownership, and as new residents of the Maple Woods development access the trails.

Dumping occasionally occurs at the northern terminus of SE 276<sup>th</sup> Street adjacent to the northeast corner of parcel -9133. Future development on these parcels may reduce this occurrence.

### Project Work

A habitat enhancement project was performed in 2003 by King County’s Small Habitat Restoration Program (SHRP) on parcel -9134 west of 268<sup>th</sup> Ave SE. The project description was to: “Enhance riparian buffer of upper Rock Creek by establishing native vegetation and suppressing invasive species including reed canary grass, knotweed and blackberry by hand removal and placement of a cardboard

sheet mulch.” (King County 2003b) Project work was performed in 2003, laying cardboard sheets and planting alders and willows along Rock Creek.

Further capital project work may be needed in the future to address the issue of creating a more defined channel through the area. This work is beyond the scope and budget currently available to the SHRP program, but may be considered as a future larger capital project in this area if prioritized and funded through the King County budget process (Adler pers. comm. 2004). As noted in Hydrology: Rock Creek section above, project work could address channel impacts within Cemetery Reach Natural Area and Ravensdale Retreat Natural Area.

## Part 5. Analysis

The purpose of this section is to provide a context and foundation for developing recommendations that meet the NRL program mission of protecting the ecological value of lands within Cemetery Reach Natural Area. Site-specific information, public access considerations, and the larger landscape considerations described in the conservation principles section of the *Ecological Lands Handbook* will be used to help meet this purpose.

### Restoring Processes, Structure, and Functions

Key problems along Rock Creek identified in the Cedar River Current and Future Conditions Report include water withdrawals by the City of Kent, and permitted or unpermitted water withdrawals; immature riparian areas and little LWD in lower stream reaches due to logging; localized agriculture and residential development at the headwaters. Future threats include large-scale residential development; logging of mature riparian forest; and impact of human recreational access to the stream. (King County 1993, p. 7-74)

The acquisition of the mature second-growth forest between Ravensdale Way and 268<sup>th</sup> Ave SE and approximately 1/2 mile of Rock Creek stream channel throughout the site contributes to the goals of the Lower Cedar Basin Plan for open space acquisition to protect high-quality habitat. (WMC 1998, p. 3-55 to 3-56) The Rock Creek Valley Conservation Plan highlights several acquisition priorities near Cemetery Reach Natural Area which would increase the acreage of publicly owned or protected land in the vicinity (FRCV 2004, Section 5.2 and Map 5.2-1). FRCV identified priorities near Cemetery Reach include Ravensdale Townsite (48 acres just southeast of Ravensdale Lake), Ravensdale Ridge West (140 acres across the railroad tracks south of Ravensdale Retreat Natural Area), Ravensdale Ridge East (80 acres south of Ravensdale Retreat’s eastern edge), and a lower priority acquisition areas on Ravensdale Ridge.

Although Kent’s water withdrawals have been noted as a contributing factor to low water levels, the site’s location upstream of the withdrawal site at the Kent Watershed would suggest that Rock Creek’s intermittent flow through the site (and for most of the channel upstream of RM 2.4) is primarily due to underlying geology and seasonal water conditions, combined with the possibility of a lowered aquifer level due to water well withdrawals upstream.

The site supports second-growth forest of different stand ages. Invasive species appear to occur at relatively low levels in the upland portions of the site. However, the Rock Creek stream channel supports extensive blackberry near the eastern end of the site, and knotweed and other weedy herbaceous species in the more open areas west of 268<sup>th</sup> Ave SE.

As described above, logging activities impacted the channel within Cemetery Reach Natural Area as well as Ravensdale Retreat Natural Area upstream. Logs felled into the stream left a poorly defined channel. A recent SHRP project was intended to reduce the presence of invasive species and included plantings of alder and willow along the stream corridor. A future major capital project may consider the value in restoration of a defined stream corridor through the area. Restoration plans should consider including Rock Creek within Cemetery Reach Natural Area and within Ravensdale Retreat Natural Area. If this



project were to be carried out by King County it would be considered a major capital improvement project to be funded and prioritized through the WLRD budget process, and would be implemented by the Capital Projects section of WLRD.

Although major habitat enhancement projects are not planned for the site at this time, detailed information about plant, fish, and wildlife species, and geologic and hydrologic conditions at the site is necessary prior to developing habitat enhancement concepts and specific designs, particularly for large-scale changes and modifications to site features. If basic site inventory and assessment is not done, there is a strong likelihood of inadvertently harming either individual plant or animal species or ecological processes that sustain one or more of these species. Therefore, prior to undertaking major management activities in this Natural Area, a site inventory and assessment should be undertaken that is focused, at a minimum, on the conditions and processes that the management activities will affect. Such assessment or evaluations of proposed actions should be conducted by staff with appropriate expertise (e.g. Watershed and Ecological Assessment Team staff).

Friends of Rock Creek Valley has recommended as priority studies for the area (in Ravensdale Lake/Creek system and in Rock Creek system as applicable) an assessment of mussel populations and of salmonid use. FRCV has also noted that osprey use of locality (including equipment at silica mine south of Ravensdale Lake) should be studied (Burlingame pers. comm., 2004b).

Any plantings performed at the site should represent the historic vegetative communities commonly associated with forested, riparian, and wetland areas in western Washington and at the site in particular. Inherent in the habitat enhancement should be efforts to maintain structural complexity, historic levels of plant diversity and multiple canopy layers in order to provide a variety of vegetative and physical features that would provide a number of niches for wildlife.

## **Public Use**

Current levels of use do not present any management problems. As surrounding areas are developed and adjacent lands are added to King County public land inventory, use may increase. The type and extent of site use should be monitored to ensure that it does not inappropriately impact sensitive areas or overall habitat quality at the site.

## **Part 6. Management Goals, Objectives, and Recommendations**

The objectives and recommendations in this section are derived from the standard practices for most NRL sites. Office of Rural and Resource Programs staff will revise the recommendations for Cemetery Reach Natural Area as new information from baseline inventory, assessment, and site monitoring programs and other initiatives becomes available for use in land management decisions.

### **Goals for Cemetery Reach Natural Area**

The goals for all King County Ecological Lands are to:

- conserve and enhance ecological value, and
- accommodate appropriate public use that does not harm the ecological resources on site

The objectives and recommendations that follow are designed to support these goals at Cemetery Reach Natural Area.

## **Management Objectives and Recommendations**

### **Objective: Maintain ecological integrity of site**

#### **Recommendation: Ensure that management and public access support the regional ecological value of the site**

Decisions about site management and public access should consider the hydrologic and habitat value of this site, and should preserve and protect ecological integrity. Public use should be focused on upland forested areas. This overarching recommendation is carried out through the various recommendations below.

### **Objective: Contain spread of invasive vegetation**

#### **Recommendation: Monitor and control invasive vegetation**

Park staff should monitor, contain the spread, and where possible to reduce the extent of noxious and invasive plant species that are present at the site. Control is primarily through manual removal of plants by Park staff. Invasive species are common along the road corridors on the western section of the site where they are readily accessible for control. On the eastern portion of the site, invasive species are prevalent in the stream corridor where access and control ability are more limited. In the eastern part of the site, containing the spread of the species, and additional habitat enhancement capital project work, may be the most appropriate way to address invasive species in this area.

### **Objective: Allow current level of impact by passive recreation at the site**

#### **Recommendation: Monitor public access**

The current level of impact by foot traffic and horse riders, primarily on the small section of the Centennial Trail through the site, does not appear to be having any negative impact on site resources.

Park staff should note changes in types of recreational activities and changes in visitor impacts on the ecological values of the site. This information should be reported annually to King County Natural Resource Lands Management Staff responsible for updating site management guidelines.

#### **Recommendation: Assess changes in use with new inventory**

As future adjacent public lands come into the King County inventory (Black Diamond Open Space and Maple Ridge Highlands/Henry's Ridge Open Space) address implications for trail use as they affect the Natural Area.

### **Objective: Protect the site from inappropriate public uses**

#### **Recommendation: Control litter/dumping and encroachment activities**

Park staff should monitor the site for encroachment and dumping, and respond as necessary to maintain a clean and safe property. In particular, monitor SE 276<sup>th</sup> Street terminus and logging roads through parcel -9133.

### **Objective: Collect information on site conditions to inform management recommendations**

#### **Recommendation: Conduct further site assessment**

As prioritized and funded, conduct ecological assessment of basic ecological conditions and physical processes. Work with Friends of Rock Creek Valley to share information on the property and Rock Creek. Assessment information may be used to develop habitat enhancement recommendations for the site.

One area in particular to be assessed, if prioritized and funded, is restoration of the poorly-defined Rock Creek channel west of 268<sup>th</sup> Ave SE.

## Objective: Maintain relationships with stakeholders

### Recommendation: Work with stakeholders to gain information and inform management

Work with Friends of Rock Creek Valley to share information on ecological resources and site use. This information may be used to identify new management actions or habitat enhancement priorities. If other stakeholder groups become apparent, work with those groups toward the same end.

## Objective: Update Site Management Guidelines

### Recommendation: Update SMG within five years or as needed due to new information

NRL should update the SMG within five years to incorporate new information, accomplishments, and to assess management recommendations at the site. This work should involve Park staff, Basin Stewards, local stakeholders, and other DNRP staff that may have been involved at the site (e.g. ecologists, capital projects).

## Implementation

Many of these recommendations pertain to ongoing site maintenance and short-term management. These short-term recommendations are currently being implemented through actions by the Parks Resource Coordinator. Table 3 presents the time frame and sections responsible for recommendations.

Recommendations that address long-term management will need to be developed when funded and prioritized by DNRP management (within the work programs of NRL, Science, Basin Stewards, and Capital Projects groups). As new information is gathered for the site, habitat enhancement projects may be developed subsequent to SMG adoption. Projects should be consistent with management objectives and approaches described above and in the Ecological Lands Handbook. Funding for enhancement projects may be available through Surface Water Management CIP funding or salmon conservation planning funds.

**Table 3. Matrix of Management Recommendations**

X indicates group that will be involved in coordinating or carrying out activity.

(X) indicates group that may be involved in activity.

Recommendations	Year	Park Resource Staff	NRL staff	Basin Steward	CPOSA	Friends of Rock Creek Valley /other local stakeholders
<b>Priority One</b>						
Monitor public access	At least quarterly	X				
Control litter/dumping and encroachment activities	At least quarterly	X				
Monitor and control invasive vegetation	At least quarterly	X				
<b>Maintain relationships with stakeholders</b>	As needed	X	X	X		X
<b>Priority Two</b>						
Assess changes in public use with new inventory	As needed	X	X			
Conduct further site assessment	As prioritized and funded		X		X	(X)
Work with stakeholders to gather further site information	As needed	X	X	X		X
Update Site Management Guidelines	Within at least 5 years	X	X	X		(X)

## References

- burlingame, j. 2004. Rock Creek Valley Landmark Names. Version: April 5, 2004. Alternative draft available on-line as Rock Creek Valley Conservation Plan – Appendix A, [www.frcv.org](http://www.frcv.org).
- burlingame, j. 2003. Rock Creek Valley Recreation Plan & Priorities, Draft. September 2, 2003.
- CPOSA. 2003. Capital Projects and Open Space Acquisitions Section, WLRD. Scope Definition Worksheet for Project 7U1095, Rock Creek Cemetery Reach SHRP. Completed 2/24/03.
- FRCV. 2004. Friends of Rock Creek Valley. Rock Creek Valley Conservation Plan. June 2004 final version. Available on-line at: <http://www.frcv.org/>
- Kerwin, J. 2001. Salmon and Steelhead Habitat Limiting Factors Report for the Cedar – Sammamish Basin (Water Resource Inventory Area 8). Washington Conservation Commission. Olympia, WA
- King County 2004. King County Comprehensive Plan, Executive Recommended Plan. Available online at: <http://www.metrokc.gov/ddes/compplan/2004/ExecRec/index.htm#toc>
- King County. 2003a. King County Ecological Lands Handbook. King County Department of Natural Resources and Parks, Water and Land Resources Division. Seattle, Washington.
- King County. 2003b. Application to alter Parks or NRL Property: Paul Adler/Anne Bikle, Rock Creek Cemetery Reach. 4/14/03.
- King County. 2001a. Conservation Futures 1998-2000 Annual Collections Application for Funds. May 9, 2001.
- King County. 2001b. Known Freshwater Distribution of Salmon and Trout Maps: Water Resource Inventory Area (WRIA) 8 <http://dnr.metrokc.gov/Wrias/8/fish-maps/distmap.htm> Page last updated 7/10/01
- King County. 2000a. Lake Sawyer and its Watershed Management Plan. King County Surface Water Management. Seattle, WA. July 2000.
- King County. 2000b. Fish Distribution Maps: Green/Duwamish Watershed WRIA 9. November 2000. Available online at: <http://dnr.metrokc.gov/Wrias/9/FishDist.htm>
- King County. 1993. Current and Future Conditions Report. King County Department of Public Works, Surface Water Management Division. November 1993 printing. Seattle, WA.
- King County. 1990. Proposed Soos Creek Basin Plan and Final Environmental Impact Statement. King County Surface Water Management Division. June 1990.
- Snyder et al. 1973. Soil Survey of King County, Washington. USDA.
- SRFB. 2002a. Salmon Recovery Funding Board. SRFB: Policies and Project Selection Grants Manual #18. Available online at [http://www.iac.wa.gov/downloads/Manual\\_18\\_4th\\_Rd.pdf](http://www.iac.wa.gov/downloads/Manual_18_4th_Rd.pdf).
- SRFB. 2002b. Third Round Funding Decision. Board Approval Date April 12, 2002. Available on-line at [http://www.iac.wa.gov/downloads/3rd\\_Rd\\_press\\_release\\_detailed.htm](http://www.iac.wa.gov/downloads/3rd_Rd_press_release_detailed.htm)
- WMC. 1998. Watershed Management Committee. Lower Cedar River Basin Plan and Nonpoint Pollution Action Plan. Produced by King County DNR and the Cedar River Watershed Management Committee. July 1998 Printing. Seattle, WA.
- WRIA 8 Service Provider Team. 2003. WRIA 8 Draft Plan Framework and Preliminary Actions List 2003. Draft published 12/31/03.
- Personal communication:**
- Adler, P. 2004. King County CPOSA Ecologist. Personal communication with Ingrid Lundin. 10/7/04.
- Brathovde, D. 2004a. Email communication with Ingrid Lundin. July 12, 2004.
- Brathovde, D. and M. 2004b. Written comments on SMG provided to Ingrid Lundin. November 22, 2004.
- burlingame, j. 2004. Email communication with Ingrid Lundin. July 12, 2004.
- burlingame, j. 2004b. Written comments on SMG provided to Ingrid Lundin. November 9, 2004.
- Holecek, L. 2004. King County Acquisitions Agent. Email communication with Ingrid Lundin. September 27, 2004.

## Appendix 1. Plant List

Plant list is incomplete, based on plants observed during July and August 2004 site visits to the property.  
Plants listed in italics are non-native species.

### TREES

<i>Acer macrophyllum</i>	Bigleaf maple
<i>Alnus rubra</i>	Red alder
<i>Populus trichocarpa</i>	Black cottonwood
<i>Prunus emarginata</i>	Bitter cherry
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Rhamnus purshiana</i>	Cascara
<i>Thuja plicata</i>	Western red cedar
<i>Tsuga heterophylla</i>	Western hemlock

### SHRUBS

<i>Acer circinatum</i>	Vine maple
<i>Berberis nervosa</i>	Oregon grape
<i>Buddleia sp.</i>	Butterfly bush
<i>Corylus cornuta</i>	Beaked hazelnut
<i>Cytisus scoparius</i>	Scot's broom
<i>Gaultheria shallon</i>	Salal
<i>Holodiscus discolor</i>	Ocean spray
<i>Hedera helix</i>	English ivy
<i>Ilex aquifolium</i>	English holly
<i>Oemleria cerasiformis</i>	Indian plum
<i>Oplopanax horridum</i>	Devil's club
<i>Polygonatum cuspidatum</i>	Japanese knotweed
<i>Prunus laurocerasus</i>	Cherry laurel
<i>Rubus discolor</i>	Himalayan blackberry
<i>Rubus laciniatus</i>	Evergreen blackberry
<i>Rubus leucodermis</i>	Blackcap raspberry
<i>Rubus parviflorus</i>	Thimbleberry
<i>Rubus spectabilis</i>	Salmonberry
<i>Rubus ursinus</i>	Trailing blackberry
<i>Salix sp.</i>	Willow
<i>Sambucus racemosa</i>	Red elderberry
<i>Sorbus sp.</i>	Mountain ash
<i>Spiraea douglasii</i>	Hardhack
<i>Vaccinium parvifolium</i>	Red huckleberry

### HERBS

<i>Arctium sp.</i>	<i>Burdock</i>
<i>Chrysanthemum leucanthemum</i>	<i>Oxeye daisy</i>
<i>Cirsium arvense</i>	<i>Canada thistle</i>
<i>Cirsium vulgare</i>	<i>Bull thistle</i>
<i>Dicentra formosa</i>	<i>Bleeding heart</i>
<i>Digitalis purpurea</i>	<i>Foxglove</i>
<i>Dipsaucus fullonum</i>	<i>Teasel</i>
<i>Geranium robertianum</i>	<i>Herb Robert</i>
<i>Heracleum lanatum</i>	<i>Cow parsnip</i>
<i>Hydrophyllum tenuipes</i>	<i>Waterleaf</i>
<i>Hypericum perforata</i>	<i>St John's wort</i>
<i>Rumex crispus</i>	<i>Curly dock</i>
<i>Senecio jacobea</i>	<i>Tansy ragwort</i>
<i>Solanum dulcamera</i>	<i>Bittersweet nightshade</i>
<i>Stachys cooleyae</i>	<i>Hedge nettle</i>
<i>Tiarella trifoliata</i>	<i>Foamflower</i>
<i>Typha latifolia</i>	<i>Cattail</i>
<i>Urtica dioica</i>	<i>Nettles</i>

### OTHER

<i>Athyrium filix-femina</i>	<i>Lady fern</i>
<i>Dactylis glomerata</i>	<i>Orchard grass</i>
<i>Dryopteris expansa</i>	<i>Wood fern</i>
<i>Luzula sp.</i>	<i>Woodrush</i>
<i>Phalaris arundinacea</i>	<i>Reed canary grass</i>
<i>Polystichum munitum</i>	<i>Sword fern</i>
<i>Pteridium aquilinum</i>	<i>Bracken fern</i>

## Appendix 2. Birds Observed in the Rock Creek Valley

This list of birds observed in the Rock Creek Valley was taken from information contained in “Facts about the Rock Creek Valley” (draft 8/17/03). Information was gathered by Audubon Society and Tetra Tech/KCM. Information about bird sightings in nearby locations is available in Appendix F of the Rock Creek Valley Conservation Plan (<http://www.frcv.org/?id=194>)

- |                                 |                              |
|---------------------------------|------------------------------|
| 1. American Coot                | 37. Orange-crowned Warbler   |
| 2. American Crow                | 38. Osprey                   |
| 3. American Goldfinch           | 39. Pacific-slope Flycatcher |
| 4. American Robin               | 40. Pileated Woodpecker      |
| 5. Bald Eagle                   | 41. Pine Siskin              |
| 6. Band-tailed Pigeon           | 42. Red Crossbill            |
| 7. Barn Swallow                 | 43. Red-breasted Nuthatch    |
| 8. Belted Kingfisher            | 44. Red-breasted Sapsucker   |
| 9. Bewick's Wren                | 45. Red-eyed Vireo           |
| 10. Black-capped Chickadee      | 46. Red-tailed Hawk          |
| 11. Black-headed Grosbeak       | 47. Red-winged Blackbird     |
| 12. Black-throated Gray Warbler | 48. Rock Dove                |
| 13. Blue heron                  | 49. Ruby-crowned Kinglet     |
| 14. Brown Creeper               | 50. Rufous Hummingbird       |
| 15. Brown-headed Cowbird        | 51. Savannah Sparrow         |
| 16. Bushtit                     | 52. Song Sparrow             |
| 17. Canada Goose                | 53. Spotted Sandpiper        |
| 18. Cedar Waxwing               | 54. Spotted Towhee           |
| 19. Chestnut-backed Chickadee   | 55. Steller's Jay            |
| 20. Chipping Sparrow            | 56. Swainson's Thrush        |
| 21. Common Raven                | 57. Townsend's Warbler       |
| 22. Common Yellowthroat         | 58. Tree Swallow             |
| 23. Dark-eyed Junco             | 59. Turkey Vulture           |
| 24. Downy Woodpecker            | 60. Varied Thrush            |
| 25. European Starling           | 61. Vaux's Swift             |
| 26. Golden-crowned Kinglet      | 62. Violet-green Swallow     |
| 27. Green Heron                 | 63. Warbling Vireo           |
| 28. Hairy Woodpecker            | 64. Western Tanager          |
| 29. Hammond's Flycatcher        | 65. Western Wood Pewee       |
| 30. House Finch                 | 66. White-crowned Sparrow    |
| 31. House Sparrow               | 67. Willow Flycatcher        |
| 32. Hutton's Vireo              | 68. Wilson's Warbler         |
| 33. Kingfishers                 | 69. Winter Wren              |
| 34. Mallard                     | 70. Yellow Warbler           |
| 35. Mourning Dove               | 71. Yellow-rumped Warbler    |
| 36. Northern Flicker            |                              |